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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/015,031	12/11/2001	Frank P. Helms	1001-0186	6376

22120 7590 08/18/2004

ZAGORIN O'BRIEN & GRAHAM, L.L.P.
7600B N. CAPITAL OF TEXAS HWY.
SUITE 350
AUSTIN, TX 78731

EXAMINER

ELAMIN, ABDELMONIEM I

ART UNIT

PAPER NUMBER

2116

DATE MAILED: 08/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/015,031

Applicant(s)

HELMS ET AL.

Examiner

A Elamin

Art Unit

2116

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Michail et al, US. Pat. No. 6,119,241.

3. Claims 1, 14, 20-23, Michail teaches a method of operating a computing system [*title, abstract*]:

determining a temperature associated with an integrated circuit [*abstract, col. 2, lines 31-32*];

operating the integrated circuit with a first performance state as a maximum performance state according to the determined temperature [*col. 2, lines 32-35*], the first performance state being one of a plurality of performance states available at the determined temperature [*col. 2, lines 31-43*].

4. Claim 2, Michail teaches the integrated circuit operates at multiple performance states within a temperature range associated with the determined temperature [*col. 2, lines 31-43*].

5. Claim 3, Michail teaches a number of performance states available for operating the integrated circuit varies according to the determined temperature [*col. 2, lines 17-57*].

6. Claim 4, Michail teaches a number of performance states available decreases when the determined temperature crosses above a temperature threshold [*col. 3, lines 52-57*].
7. Claim 5, Michail teaches each performance state is defined by at least one of an operating voltage and frequency of the integrated circuit [*abstract, col. 2, 36-44*].
8. Claim 6, Michail teaches each performance state is defined at least in part by how much of the integrated circuit is being utilized [*col. 5, lines 20-28*].
9. Claim 7, Michail teaches the integrated circuit is a processor [*abstract*].
10. Claims 8-11, Michail teaches switching to a second performance state as the maximum performance state when the temperature exceeds a first temperature threshold and wherein the second performance state is a lower performance state than the first performance state [*Fig. 2, col. 3, line 58 thru col. 5, line 44*].
11. Claim 12, Michail teaches the determination that the temperature exceeds a first temperature threshold is a determination that the temperature has moved from a first temperature range associated with the first performance state being the maximum performance state to a second temperature range associated with the second performance state being the maximum operating state [*col. 1, line 66 thru col. 2, line 14*].

12. Claim 13, Michail teaches the first and second temperature ranges have a boundary at the first temperature threshold [*col. 3, lines 52-57*].

13. Claims 15, 17, Michail teaches a temperature detection mechanism coupled to detect a temperature associated with the integrated circuit; and wherein the computing system is operable to change to a different maximum performance state according to the detected temperature [*abstract, col. 2, lines 17-58*].

14. Claim 16, Michail teaches the detected temperature is a die temperature [*col. 1, lines 46-52*].

15. Claim 18, Michail teaches the number of performance states available varies according to the detected temperature [*Fig. 2, col. 3, line 58 thru col. 5, line 44*].

16. Claim 19, Michail teaches the integrated circuit is a processor [*abstract*].

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to A Elamin whose telephone number is (703)305-3804. The examiner can normally be reached on MON-FRI 9:30 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Browne can be reached on (703) 308-1159. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A Elamin
Primary Examiner
Art Unit 2116

August 13, 2004



A. ELAMIN
PRIMARY EXAMINER